



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/763,294	02/21/2001	Yukihiro Miyama	108669	4979

25944 7590 01/20/2004

OLIFF & BERRIDGE, PLC  
P.O. BOX 19928  
ALEXANDRIA, VA 22320

EXAMINER
----------

SADULA, JENNIFER R

ART UNIT	PAPER NUMBER
----------	--------------

1756

DATE MAILED: 01/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/763,294

Applicant(s)

MIYAMA ET AL.

Examiner

Jennifer R. Sadula

Art Unit

1756

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2003 and 17 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 11/17/2003 6) ☐ Other: \_\_\_\_\_

Art Unit: 1756

### **DETAILED ACTION**

The following Office Action is a complete response to the amendment and arguments filed 11/17/2003.

#### ***Information Disclosure Statement***

The information disclosure statement (IDS) submitted on 11/17/03 has been considered by the examiner. However, the examiner wishes to note that these references merely submitted with English translations of an abstract have only been considered on the merits of that which was in English and no more.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Oskinoshima et al., U.S. Patent No. 5,441,845 ("Oskinoshima I").

Oskinoshima I teaches a photosensitive polymeric composition for use as a protective film or for use as an alignment film wherein the alignment film is photoaligned due to photosensitivity. The polymer as taught substantially overlaps the orientation films of the

Art Unit: 1756

present invention. In particular, see formulas 1 and 3 wherein the polyimide precursor is taught. See also a-1. Examiner further notes that the claim language of claim 1, specifically, "used in a method for alignment of liquid crystal molecules that form a liquid crystal alignment film comprising irradiating a thin alignment film formed on a substrate with polarized light or electron rays and aligning the liquid crystal molecules on the substrate without any rubbing treatment" has been regarded as intended usage language noted in a preamble. Because this language is written to intentionally define a property of the composition claimed (i.e.: the composition is capable of performing such a functionality) then the Examiner has determined that the products of Oskinoshima I, which are of identical chemical composition, must therefore not have mutually exclusive properties from those of Applicants claimed invention *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

Claims 1-7, 10 and 14-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Endou et al., U.S. Patent No. 6,274,695 ("Endou I").

Endou I teaches an alignment agent for liquid crystals wherein polarized UV light or electron rays irradiate a polymer thin film formed on a substrate wherein the substrate is used for alignment of liquid crystals without rubbing (abstract). The polymer materials have a glass transition point of at least 200°C and include materials such as polyimides (Applicants' claim 6), polyamides (Applicants' claim 3), polyamideimide, polyesters and polyurethanes (Applicants' claim 10) (5:13-29). Although Endou I teaches that the compounds of formulae 1-4 are preferred, the invention is clearly not limited to such, thereby remaining to anticipate Applicants' claim 2.

Art Unit: 1756

Formula 7 depicts the polyamide as claimed by Applicants' claim 4 wherein Applicants claim 5 is anticipated in that Endou I teaches R7 and R8 to be bivalent organic groups- thereby encompassing many of Applicants suggested radicals.

Formula 9 depicts the polyamide as claimed by Applicants' claim 7 wherein Applicants claim 5 is anticipated in that Endou I teaches R7 and R8 to be bivalent organic groups- thereby encompassing many of Applicants suggested radicals.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-15 are further rejected under 35 U.S.C. 103(a) as being unpatentable over Yazaki et al., U.S. Patent No. 6,025,895 ("Yazaki") in view of either Oskinoshima I, as applied above or Oskinoshima et al., U.S. Patent No. 5,292,619 ("Oskinoshima II").

Yazaki teaches a liquid crystal display consisting of polyimide or polyamic acid alignment films where rubbing treatment is not administered. The full device is disclosed, however the composition of the alignment film is not fully disclosed but merely that it be a polyimide film.

Both Oskinoshima I and Oskinoshima II teach polyimide alignment film materials for use in situations where rubbing is not preferred. Both references define polyimides as inclusive of

Art Unit: 1756

polyamic acids and such derivations (note formulas I and II in Oskinoshima II and formulas I and III in Oskinoshima I).

It would have been obvious to one of ordinary skill in the art at the time of invention to make or use the device of Yazaki with the polymeric film materials of either Oskinoshima I or II as Yazaki teaches that the film material be of polyimine photosensitive materials and both secondary references teach examples of such.

### *Response to Arguments*

Applicant's arguments filed 11/17/2003 have been fully considered but they are not persuasive.

With regard to the teaching of Oskinoshima, Applicants claimed invention is drawn toward a liquid crystal alignment agent comprising irradiating a thin alignment film and aligning a liquid crystal without rubbing wherein the liquid crystal alignment agent comprises a polymer having the formula 1-7. As stated above, Examiner notes that the claim language of claim 1, specifically, "used in a method for alignment of liquid crystal molecules that form a liquid crystal alignment film comprising irradiating a thin alignment film formed on a substrate with polarized light or electron rays and aligning the liquid crystal molecules on the substrate without any rubbing treatment" has been regarded as intended usage language noted in a preamble.

Applicant argues that the present invention differs from that of Oskinoshima as, "the claimed liquid crystal alignment agent does not require such processing. The claimed compound can provide alignment to liquid crystals simply by applying the agent on a substrate to form a liquid crystal alignment film and irradiating with polarized light" (arguments, page 13, bottom)

Art Unit: 1756

(emphasis added). Examiner notes that the arguments, while drawn toward intended use of the composition, are not drawn to structural distinctions between the Applicants' claimed invention and the teaching of Oskinoshima.

Furthermore the applicants argue that Oskinoshima "does not teach photosensitive agents or resin compositions treated by irradiating a thin alignment film formed on a substrate with polarized light, as claimed." Examiner argues that the intended use noted in the preamble does not patentably distinguish Applicants' claimed invention from the teaching of Oskinoshima. Applicants are merely asserting claim language as though the claims were written as product-by-process claims, and not as compositional claims.

With regard to the arguments made with regard to the Yazaki reference, Applicants argued "the motivation for one of ordinary skill in the art, from the teachings of Yazaki, would have been limited to the use of a polyimide film, without rubbing treatment, to maintain randomly oriented crystal molecules." (arguments, bottom of page 14). Here, examiner notes that a form of intentional alignment of liquid crystals is indeed random orientation. Therefore, since the compounds of Yazaki do indeed perform intentionally random orientational alignment- then these compounds do perform an alignment purpose within the boundaries of the Applicants claim language.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Art Unit: 1756

Endou et al., U.S. Patent No. 6,063,829 ("Endou II") teaches alignment films utilizing polyimide resins containing the repeating unit shown in formula 1 (abstract).

Yoshida et al., U.S. Patent No. 6,583,835 teaches alignment films for use in an LCD wherein the pre-tilt angles are adjusted without rubbing through UV exposure of the alignment films (polarized light) (abstract) (see also column 5-6 for specifics of the polymer alignment film).

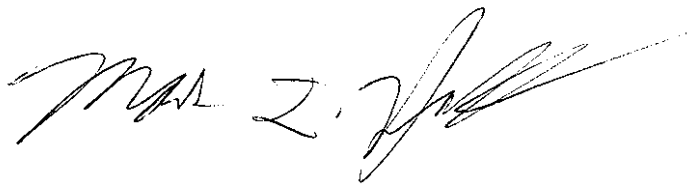
Kanemoto et al., U.S. Patent No. 5,250,214 ("Kanemoto") teaches the use of polarized light when rubbing is not warranted.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer R. Sadula whose telephone number is 571.272.1391. The examiner can normally be reached on Monday through Friday, 10am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark F. Huff can be reached on 571.272.1385. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703.308.0661.

JRS  
12.29.2003



MARK F. HUFF  
SUPERVISOR  
TECHNOLOGY CENTER 1700